STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
BUREAU FOR PUBLIC HEALTH
OFFICE OF ENVIRONMENTAL HEALTH SERVICES

Joe Manchin III
Governor

Martha Yeager Walker
Secretary

June 30, 2008

Joyce A. Chandler
US EPA Office of Compliance
Mailcode 2224A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: West Virginia
2007 PWS Annual Compliance Report

Dear Ms. Chandler:

Enclosed is a copy of West Virginia's Annual Compliance Report for the period January 1, 2007 through December 31, 2007 which contains our letter, introduction, violation list for each public water system who received a violation in 2007, and Appendices A - D.

If you have any questions, please feel free to contact me at 304-558-6733 or via e-mail at donwang@wvdhhr.org.

Sincerely,

Don Wang

Don Wang, P.E., Assistant Manager
Compliance and Enforcement Unit
Environmental Engineering Division - DHHR

DLW/tlm
Enclosure

pc: Wanda F. Johnson, WV Program Manager, EPA-Region III
Karen D. Johnson, SDWA Branch, EPA-Region III
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West Virginia
2007 Annual Report

Introduction

The United States Environmental Protection Agency (US EPA) granted the State of West Virginia the authority to implement the Safe Drinking Water Act (SDWA) in 1976. The West Virginia Department of Health and Human Resources (WVDHHR)/ Bureau for Public Health/ Office of Environmental Health Services/ Division of Environmental Engineering, located in Charleston, West Virginia, provides program oversight through five district offices located state-wide (see Appendix D).

Annual Compliance Report

The WV Bureau for Public Health (WVBPH) collects information of all reported public water system program data and submits it to the US EPA on a quarterly basis. This includes inventory information, Maximum Contaminant Level (MCL) violations, Monitoring/Reporting (M/R) violations, and Treatment Technique (TT) violations. The annual report compiles the violations into the aforementioned categories and presents them in Appendix B.

Definitions

Public Water System - A public water system (PWS) is defined by the SDWA as any water supply or system that regularly supplies or offers to supply water for human consumption through pipes or other constructed conveyances, if serving at least an average of twenty-five individuals per day for at least sixty days per year. Systems are classified as “community” (towns, cities or mobile home parks), “non-community non-transient” (factories or schools) or “transient non-community” (parks, restaurants).

Maximum Contaminant Level (MCL) - Under the SDWA, national limits establish allowable contaminant levels in the drinking water to ensure that it is safe for human consumption. Appendix C identifies specific contaminant levels for the regulated analytes.

Treatment Techniques (TT) - Some regulations require specific treatment techniques, instead of MCL levels, to control contaminants. Filtration requirements are examples of methods to control viruses, bacteria, cysts and turbidity.

Monitoring/Reporting (M/R) – PWS must perform monitoring to verify that the drinking water meets SDWA standards. An M/R violation occurs if the PWS fails to monitor or report test results during the required monitoring period.

Significant (Major) Monitoring Violations - A major monitoring violation (with the exception of the Surface Water Treatment Rule) occurs when a required test result or report has not been received within ten (10) days from the end of a compliance period (a minor violation occurs when an incomplete number of test results are submitted within the proper time frame). A major Surface Water Treatment Rule M/R occurs when less than 10 percent of the required samples test results are reported during a compliance period.

Drinking Water Program Initiatives
In addition to enforcing the federally mandated MCLs, treatment techniques and monitoring requirements, the West Virginia Bureau for Public Health (WVBPH) has developed additional programs to assist and assure that the drinking water distributed by the state's approximately 506 community and 600 non-community water systems (as of 5/28/08) meet the requirements of SDWA. These include:

Operator Training and Certification-
The Operator Certification Program in West Virginia is one of the oldest in the nation and currently requires all public water system (PWS) operators to complete education, training and certification requirements covering basic knowledge of water treatment concepts and regulations. The US EPA approved the WV Operator Certification Program on February 20, 2002. Title 64, Legislative Rule, Bureau for Public Health, Series 4, *Public Water Systems Operator Regulations* (effective April 18, 2007) provides the basis for program direction and enforcement authority to the Certification & Training (C&T) section of the Environmental Engineering Division. C&T works closely with operators, PWS's and other state drinking water programs to ensure adequate operator coverage at each public water system. Sanitary surveys, field inspections, and routine reporting assist with compliance and enforcement. Potential violations can also be determined through queries of the SDWIS/STATE and Safe Water Operator Certification System (SWOCS) databases. C&T can suspend or revoke operator certifications if minimum requirements are not met.

WV recognizes six classes of public water systems; 1D, WD, and Class I-IV. Classification is a descriptive definition based on source, population served, and treatment requirements. The WD classification is new and refers to a PWS that obtains all of its water from another PWS, and is not owned or operated by the supplying PWS. Prior to the new regulation, WD systems were commonly referred to as purchase systems. There are seven classes of certified operators; 1D, WD, OIT, and Class I-IV. The general education, experience and training requirements for each operator certification are as follows.

Certification	Education	Experience	CEHs/Year
1D	8th Grade, 1 day class, pass exam	None	None
OIT	On-the-job experience under supervision of Chief Operator	None	6 and attempt WD or Class I exam
WD	12th Grade or GED, approved class, pass exam	1,000 hours	6
I	12th Grade or GED, 1-week Class I training, pass exam	2,000 hours	12
II	12th Grade or GED, 1-week Class II training, pass exam	6,000 hours	24
III	12th Grade or GED, 90 CEUs, pass exam	10,000 hours	24
IV	12th Grade or GED, 180 CEUs, pass exam	12,000 hours	24

All operator certifications require renewal every 2 years. There are no fees for initial operator certification or renewal. In most cases, renewal requires completion of continuing education hours (CEHs) to promote continued learning. All PWS's, excluding 1D systems, must designate a Chief Operator. The statistics below compare the number of operators trained and certified for the calendar years 2006 and 2007, based on the OEHS monthly report.

Subject	Year 2006	Year 2007
Operators Trained	382	584
Operators Certified	1,151	1,121

To improve operator training and increase exam relevancy, C&T "chairs" the Drinking Water Exam Review Committee (comprised of State regulators, educators, and current Class IV operators). This committee has validated at least 2 versions of each operator exam and continues to review and revise the exams to ensure that baseline knowledge is established for each certification level. All exam questions are based on what operators indicate they "need to know" for the job.

To improve communication of operator related information, C&T has a website (http://www.wvdhhr.org/oehs/eed/swap/training&certification/) which contains forms, certification information, training and testing schedules, study materials, regulations, and continuing education opportunities. C&T also publishes a regularly-scheduled newsletter called *Drips and Drops*, which is distributed to all operators via mail and posted on the website to inform operators of up-coming water regulations and events. C&T provides an exhibit and program representatives at operator-related events such as WV Expo, WV Rural Water Association Annual Conference, and Public Health Day.

To facilitate operator training, the C&T is exploring alternative means of instruction including on-line training and cooperation with educational partners (i.e., vocational technical schools and community colleges).

Compliance and Enforcement – This Section is made up of the Central Office located in Charleston, West Virginia, and five (5) District Offices strategically located throughout the State. They provide technical help to PWS operators (compliance) while issuing violations (enforcement) to return recalcitrant systems to compliance.

Central Office - The Central Office focuses primarily on returning water systems to compliance with Federal and State Drinking Water regulations. Enforcement tools presently used include violation letters, Administrative Orders w/o penalty, Food Permit Suspension Requests (for those water systems with food permits), and Food Permit Suspension Warning Letters.

The Food Permit Suspension (FS) Request, developed by the Central Office in early 2005 and implemented in conjunction with county sanitarians, suspends the food (and accompanying liquor license) of a PWS until it returns to compliance for all outstanding violations. It has been highly effective in returning to compliance water systems that have been chronic violators.

The Food Permit Suspension Warning (FW) Letter is a recent development that informally warns the water system of an impending Food Permit suspension if it does not quickly comply. It has the advantage of not requiring Upper Management signatures to implement (faster turnaround), does not require action from the County Sanitarian, and does not disrupt the water system's business. So far, the response from the water systems in returning to compliance has been very good.

Of the four (4) FS Requests implemented, all water systems were either deactivated or returned to compliance. Of the twenty-three (23) FW letters issued, seventeen (17) resulted in water systems returning to compliance without further action.

Thirty-six (36) administrative orders (AO's) without penalties were issued against water systems in 2007 as compared to eleven (11) AO's in 2005. Of the thirty-six (36) AO's issued, Twenty (20) systems returned to compliance. Eight (8) systems, with limited management and financial resources, were turned over to Capacity Development for assistance.

Subject	Year 2006	Year 2007
Violation Letters	5537	5861
Administrative Orders w/o Penalty	11	36
Food Permit Suspend Request	20	4
Food Permit Warning Letter	5	23

In addition to the enforcement side, the group encourages PWS compliance by: (1) mailing annual monitoring schedules to them, (2) providing technical assistance on PWS violation, public notice, and testing issues, and (3) mailing letters reminding them that their test results are due.

Please note that the 5537 generated violation letters (found above) differs from the number contained in the 2006 Annual Compliance Report submittal (4340 generated violation letters). The present number (5537) came from the Federal SDWIS data that was frozen on 2/07 while the former number (4340) came from the State SDWIS data that was queried in late 6/07. The differences stem from (1) violation recissions occurring later in the year and (2) EPA's method of carrying over unresolved violations. We are now using (and will continue to use) the Federal SDWIS data sets for consistency.

Sanitary Surveys and Inspections – The five (5) District Offices, located throughout the State, conduct comprehensive sanitary surveys to ascertain PWS compliance with State and Federal Drinking Water Standards.

Community surface and groundwater-under-the-influence water systems are surveyed every three years; community groundwater, purchase, non-community surface water systems, and groundwater-under-the-influence systems are surveyed every five years; and non-community ground and purchase systems are surveyed every ten years.

Annual inspections are conducted to inspect surface water treatment plants, and other site visits are conducted to respond to specific problems and to provide assistance to systems' requests. Disinfection By-Product (DBP) compliance is a prime example of this more hands-on approach.

Upon completion of the inspection or survey, the Engineer outlines his/her findings, conclusions, and recommendations in a report sent to the PWS. State code mandates that the PWS respond to significant sanitary survey deficiencies, in writing within forty-five days from receipt of the report, with an implementation plan (including possible equipment procurement, benchmark schedule, etc) to correct the deficiencies.

Technical Assistance – In addition to inspections, the Engineers, Technicians, and District Sanitarians provide technical assistance regarding water quality, source protection, water treatment, and water distribution issues in an effort to improve PWS compliance. District office locations and their service areas are shown on Appendix D.

The District Offices continued their proactive approach towards compliance by increasing the number of visits to the water systems in all categories listed except for Turbidity Technical Assistance visits. Because of the AWOP program success, it may have allowed the District Offices to focus their resources to other areas, ie, DBP visits.

Subject	Year 2006	Year 2007
Sanitary Surveys	248	288
Annual Site Visits	69	94
DBP Visits (Technical Assistance)	315	360
Turbidity (Technical Assistance)	122	78
Town Council Meetings Attended	30	41

Source Water Assessment and Protection Program (SWAP) – This Program protects West Virginia streams, rivers, lakes, reservoirs, and ground waters (used for public drinking water) from future contamination by providing educational information aimed at reducing potential water contamination. This information is provided to water systems, and to other local groups (i.e., local watershed protection organizations) that are interested in implementing source water and water system protection. SWAP continually assesses new PWS potential contamination, and revisits existing systems when source water changes.

The Wellhead Protection Program, a subset of SWAP, protects against groundwater supply contamination by assisting the PWS in identifying and managing potential sources of contamination within a designated area surrounding drinking water wells. This area is the land area that allows surface water to recharge the underground well aquifer.

The program taps into local and county, state regulatory (i.e., Department of Environmental Protection, and educational (i.e., West Virginia University) resources and expertise to meet its objectives.

The Ground Water Under the Direct Influence (GWUDI) Program, another subset of SWAP, implements monitoring requirements (bacteria tests) to determine which ground water sources are affected by surface water sources, and to designate them as GWUDI sources (GWUDI sources are subject to more extensive monitoring requirements than ground water sources).

The West Virginia Bureau for Public Health had classified one hundred percent of all public groundwater sources in service prior to January 1, 2004. New sources will be tested/classified within eighteen (18) months of being activated.

Infrastructure and Capacity Development Section

The Infrastructure and Capacity Development Section supports PWS compliance with the SDWA through the following groups: (1) Capacity Development, (2) Water System Construction Permitting, (3) Drinking Water Treatment Revolving Fund (DWTRF), and (4) State and Tribal Assistance Grants (STAG).

Capacity Development - The Capacity Development Group supports compliance by: (1) performing PWS capacity development assessments, (2) tracking consumer confidence report (CCR) submittals, (3) providing direct PWS assistance and referring PWS to third party assistance providers, (4) implementing a new PWS capacity development managerial and financial review, (5) conducting on-site assistance visits at systems classified by EPA as significant non-compliers (SNC), and writing articles for various newspapers and magazines. The SNC systems, being helped by Capacity Development, are generally small water systems with no designated Administrative Contact and very little resources. Usually, a number of governmental agencies, including Capacity Development, coordinate efforts to assist these SNC systems.

The Group performs capacity development assessments (CDAs) and evaluates a water system's technical, managerial, and financial capabilities. The PWS receives a detailed report providing the Group's conclusions and recommendations. Implementing the report recommendations will lead the water system to long term stability and viability. A CDA is mandatory for water systems seeking DWTRF funds. However, the Group will perform the assessment for any PWS asking for this assistance.

Community water systems must complete their Consumer Confidence Report (CCR) annually. The CCR provides their customers drinking water quality information. Water system compliance has been consistent from 2005 to 2007 with 90%, 95%, and 91% compliance rates, respectively.

The Group provides direct PWS assistance and also serves as a clearinghouse, providing shared information and ideas among water systems. Although vacancies caused short staffing throughout the year, one staff person continued focusing primarily on assessment follow-up and assistance. A formal follow-up call and tracking system was initiated, documenting assessed systems' progress addressing recommendations, and offering additional assistance. Follow-up calls and tracking have resulted in additional assistance requests and direct, on-site PWS assistance. Idea sharing has been facilitated through an informal and informative public forum, CAPDEV (**C**apacity **A**ssistance **P**artnership **D**eveloping **E**ssential **V**iability). CAPDEV is a unique PWS gathering and discussion venue. PWS's, attending CAPDEV meetings, network with their drinking water neighbors and are encouraged to pursue Mutual Aid Agreements. Drinking water system technical, managerial, and financial activities are discussed.

All proposed new PWSs are reviewed by the Group. Any proposed PWS meeting EPA's new water system definition must complete *Form EW-100 Addendum to Permit Application to Install, Extend, or Modify a Community or Non-Community Non-transient Public Water System – Capacity Development Requirements (EW-100 Addendum)* and include it with their construction permit application. Through this process, the new PWS must demonstrate adequate managerial and financial capability before a construction permit will be issued.

Water System Construction Permitting Plan Reviews – This Group ensures compliance with Federal and State Water Treatment Construction Design Standards by requiring that new and existing facilities, being modified, obtain a "Permit to Construct" from the WVBPH prior to construction. The number of water construction permits increased slightly from the prior year.

Drinking Water Treatment Revolving Fund (DWTRF) - This Group assists water systems in upgrading their facilities to achieve compliance with the Safe Drinking Water Act. Since its inception through 2007, the DWTRF has funded thirty-six projects, totaling nearly $60 million. From 2006 to 2007, the number of DWTRF loans increased by 1 to a total of 4. During the same period, the amount of loans decreased by $1,000,000 to $5,400,000.

State and Tribal Assistance Grants (STAG) - This Group provides oversight capabilities for the Federal EPA in administering Congressional grants approved for water treatment projects. Due to the congressional controversy regarding earmark projects, no projects were approved in 2007.

Subject	**2005**	**2006**	**2007**
1. CDA's Completed	**28**	**16**	**15**
2. PWS Subject to CCR Rule	**531**	**532**	**503**
2. CCR's Completed	**478**	**504**	**470**
3. Water Permits Approved	**313**	**287**	**300**
4. DWTRF Loans	**5**	**3**	**4**
4. DWTRF Loan $	**5.3 M**	**6.4 M**	**5.4 M**
5. STAG Grants Administered*	**30**	**31**	**31**
5. STAG Grant $ Administered*	**27.6 M**	**28.6 M**	**28.6 M**
6. On-Site Follow-Up Visits from prior CDA's		**5**	**5**
7. Participating water systems in CAPDEV Meetings		**18**	**18**

Note: all data is for calendar year except those marked with *, which are cumulative.

Conclusion

A graphical representation of the Federal Annual Compliance Report data for West Virginia has been generated to visually assist in correlating violations trends with use of various compliance tools. By better understanding the causes of increased/decreased violation generation, effective compliance tools can be emphasized while modifying/discarding non-effective tools. Each of the following graphs is accompanied by an explanation of historical events that may account for the trends.

Graph 1 – Total Violations

Graph 1 shows the overall violation trend for West Virginia. Prior to 2004, the District Offices manually generated violations. The 2000 to 2003 trend indicates that the State has been progressing towards compliance even though it includes the accumulation of old violations from "basket case" water systems (EPA violation accumulation method).

The 2004 jump in violations can be attributed to a confluence of events. These included: (1) the incorporation of SDWIS/automated violations generator (versus the District Office labor-intensive manual method), (2) the addition of the 3-year violations for VOC, SOC, and IOC requirements, and (3) the first year violation generation for the DBP rule.

The 2005 violations decrease was expected with the passing of the 3-year VOC, SOC, and IOC violations. LCR and CCR violation increases (see Graphs 9 and 11 discussion) plus the introduction of PN violations (Graph 12) caused the bump-up in 2006. The resumption of the 3-year violations, addition of the RAD violations (revised rule), and increased PN violations accounted for the 2007 increase.

Graph 2 – VOC Violations

As discussed earlier, the 2004 violation peak is attributed to the use of an automated system and the addition of 3-year violations. The slight violation generation decrease between 2005 and 2007 may indicate progress towards returning systems to compliance.

Graph 3 – SOC Violations

The SOC graph shows the expected increase in 2004 (resumption of 3-year violations) but, rather than decreasing in 2005, violation generation remained level before increasing in 2007 (resumption of 3-year violations). This may be attributed to systems adding violations and returning to compliance at approximately the same rate.

Graph 4 – IOC Violations
The IOC graph shows 2005 and 2007 to be in-line with expectations. The violation increase in 2006 was caused by more systems violating the requirements (119 to 131) in addition to the violations carryover.

Graph 5 – RAD Violations
The revised RAD Rule generally required four (4) quarters of data to be collected between 2005 and 2007. Violations for this requirement began in 2007.

Graph 6 – TCR Violations
Being one of the oldest requirements, the compliance has steadily dropped with each passing year although it appears to have flattened out somewhat in 2007. The violations have probably plateaued on the "basket cases" that have little resources to do testing. These cases have been referred to either EPA for further enforcement action or to the Capacity Development Group for assistance in resource procurement or other means of returning to compliance.

Graph 7 – SWTR Violations
The progressive geometric decrease in SWTR violations (slight increase in 2007) may be attributed to the District Office aggressiveness in introducing the water systems to the AWOP program. They approached each water system and visually showed the operators the turbidity relationship (AWOP software program) between raw water intake and finished water. The District Offices also prepared a turbidity ranking list comparing the individual system to its peers. These actions have resulted in a competition atmosphere among the water systems to try and "top the list".

Graph 8 – IESWTR Violations
See Graph 7 discussion above.

Graph 9 – LCR Violations
The Federal Compliance Report trend for LCR does not parallel the Compliance & Enforcement (C&E) LCR Violations Summary for the same time period. From 2004 to 2007, the Federal Annual Compliance Report documented 211, 37, 216, and 234 violations, respectively. For the same period, C&E generated approximately 100, 35, 28, and 75 violations, respectively. The cause for the dissimilar two data sets, even accounting for EPA's cumulative method, cannot be explained at this time.

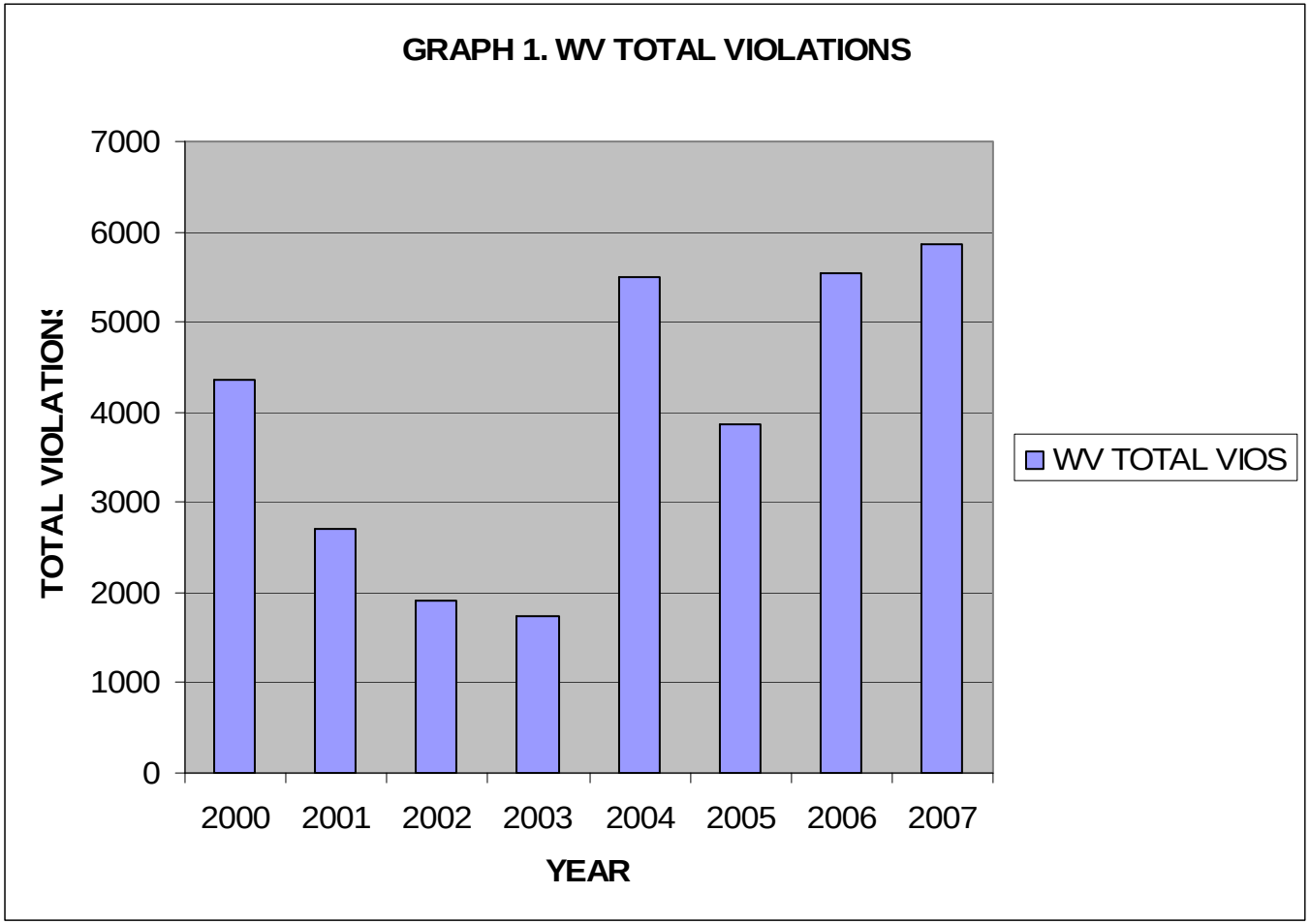
Beginning in the 2008 to 2010 period, the number of violations per year is expected to level out due to the revised rule. Although each system on a 3-year monitoring period only needs to test once during that period, the State assigns the specific year that testing shall be performed. By spreading the test requirement equally over the 3-year period, the number of violations incurred should also be spread equally for each year.

Graph 10 – DBP Violations
The decreasing trend in both the MR and MCL violations may be attributed to the District Office assistance in recommending individual system operational changes and trial-and-error experience gained by the water system operators.

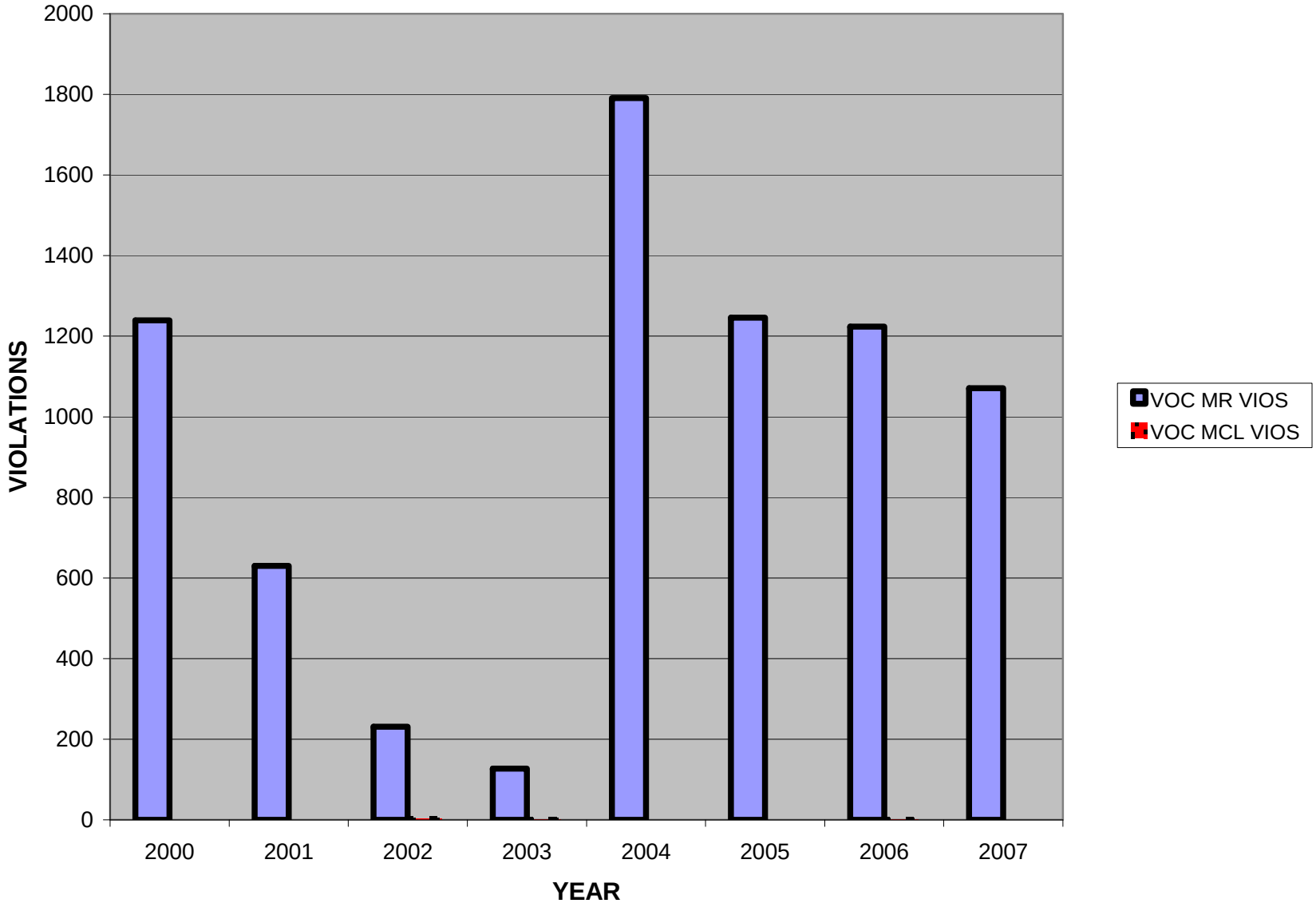
Graph 11 – CCR Violations
In 2005, the State mailed letters to each water system reminding them that CCR's were due. This appeared to have a significant impact on violations. In 2006, the letter campaign was replaced by a more general call for CCR's through conferences (ie, Rural Water Conference) and newsletters. This did not seem to work very well so the individual mailings were re-implemented in 2007 with better results.

Graph 12 – PN Violations

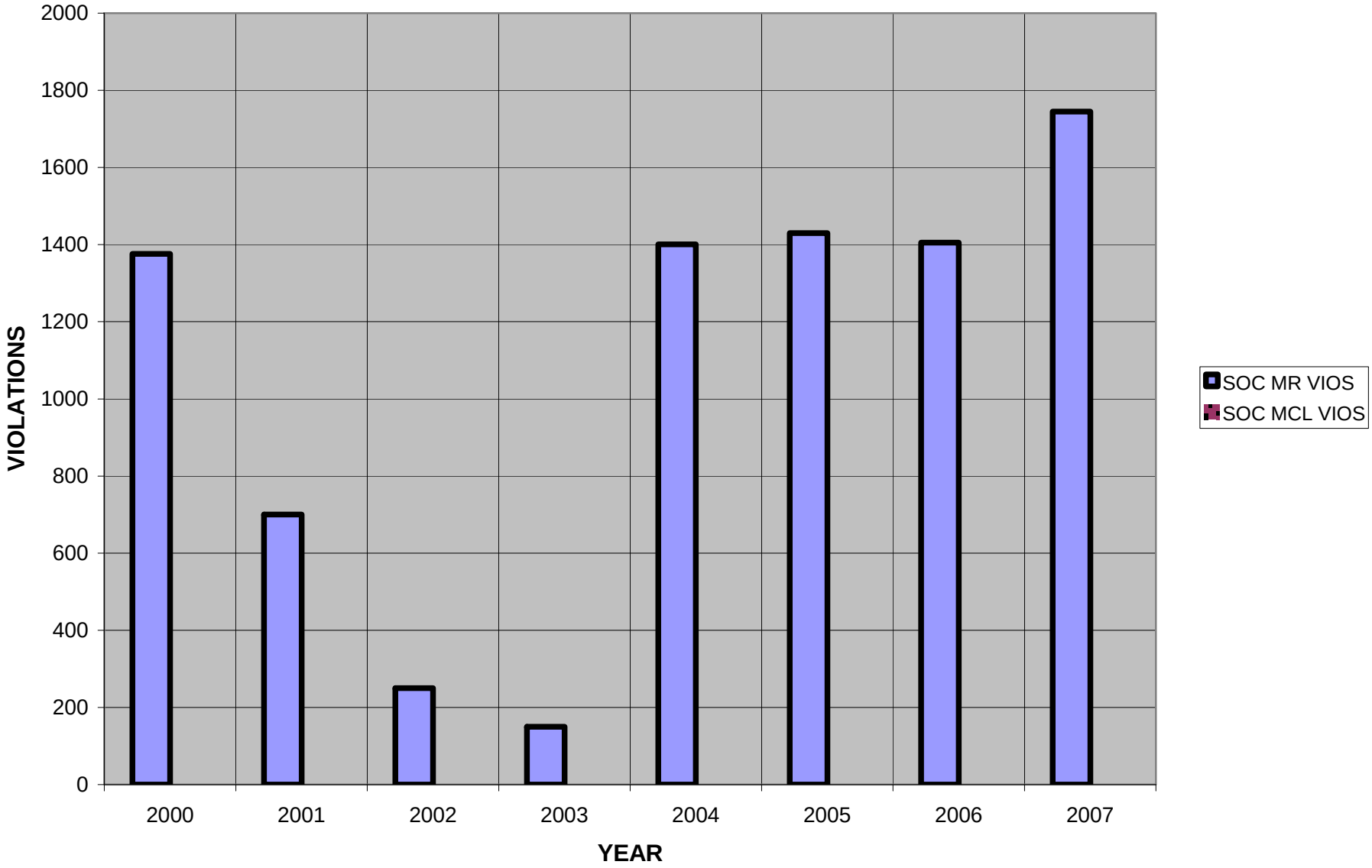
The 2006 to 2007 increase in PN violations was caused by: (1) the increase of the 2006 violations (5537) over the 2005 violations (3875) and (2) the EPA cumulative method. Note that the Tier 3 PN violations (the bulk of the PN violations) lag the original violations by approximately one (1) year. On a percentage basis, the violations have decreased. The 2006 PN violations constituted about 9% (347/3875) of the 2005 violations generated while the 2007 PN violations constituted 6% (336/5537) of the 2006 violations generated.


GRAPH 1. WV TOTAL VIOLATIONS
TOTAL VIOLATIONS
7000
6000
5000
4000
3000
2000
1000
0
2000
2001
2002
2003
2004
2005
2006
2007
YEAR
WV TOTAL VIOS

GRAPH 2. WV VOC VIOLATIONS

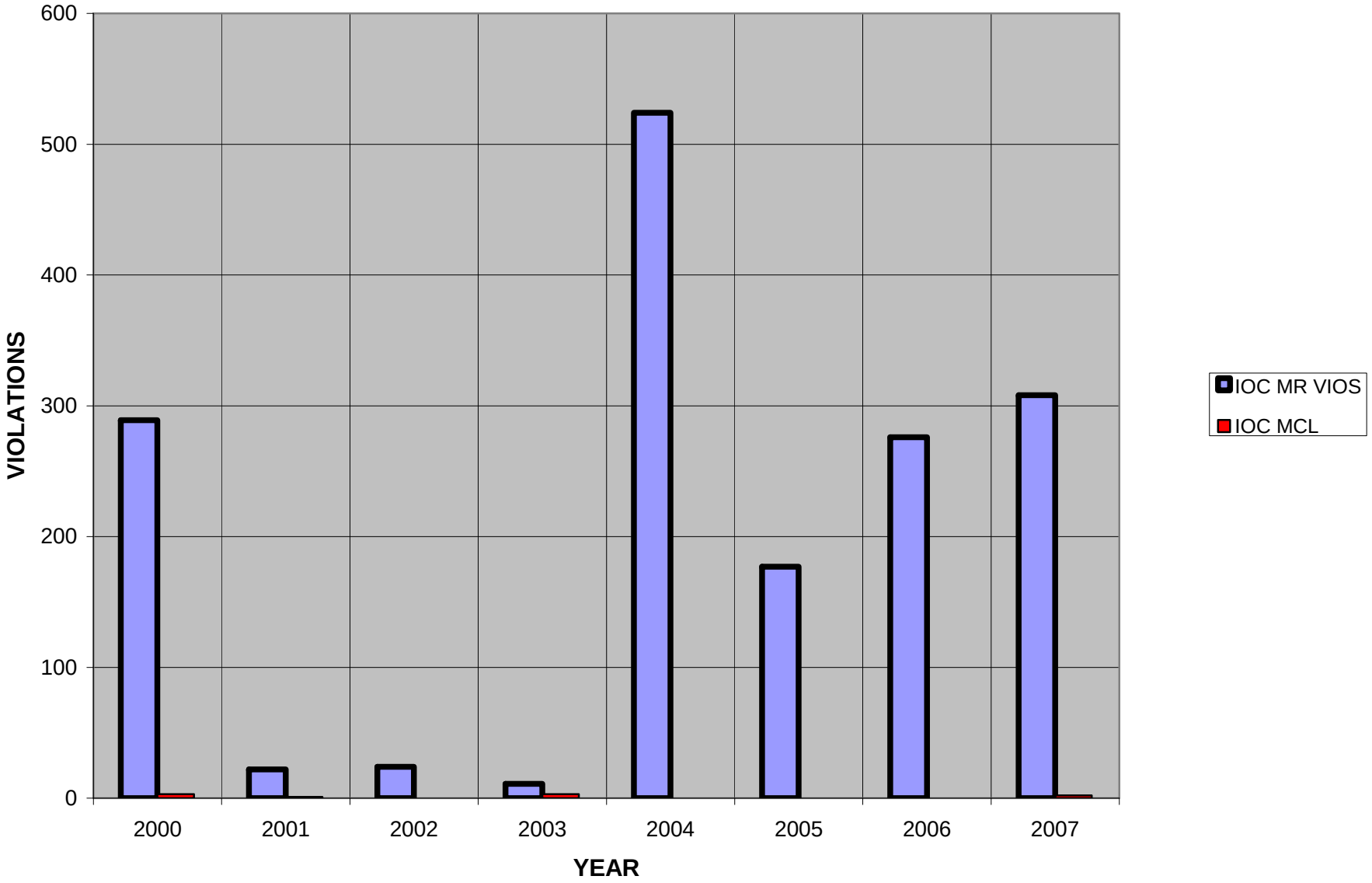


GRAPH 3. WV SOC VIOLATIONS

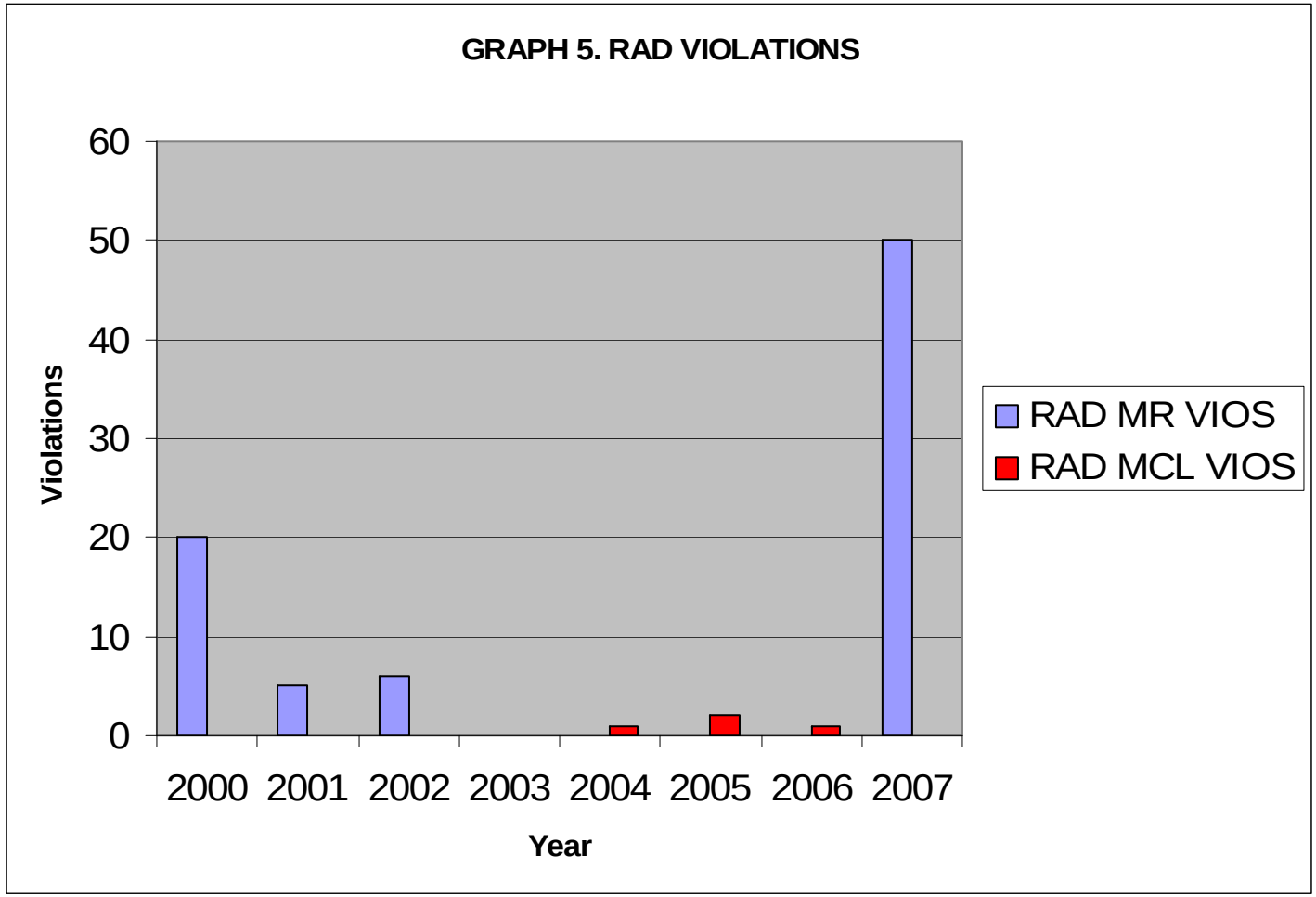


Freedom Addendum_4132

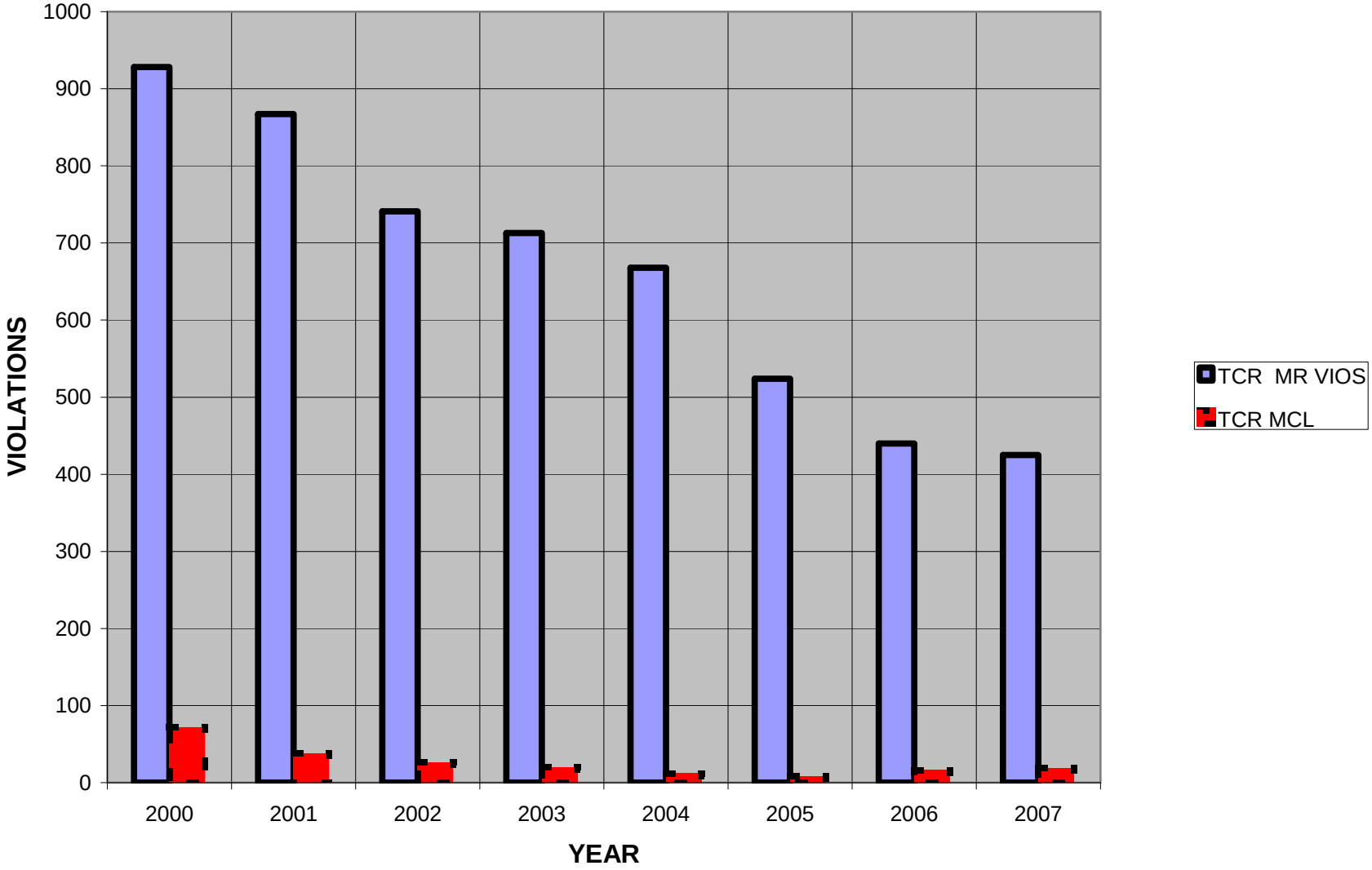
GRAPH 4. WV IOC VIOLATIONS



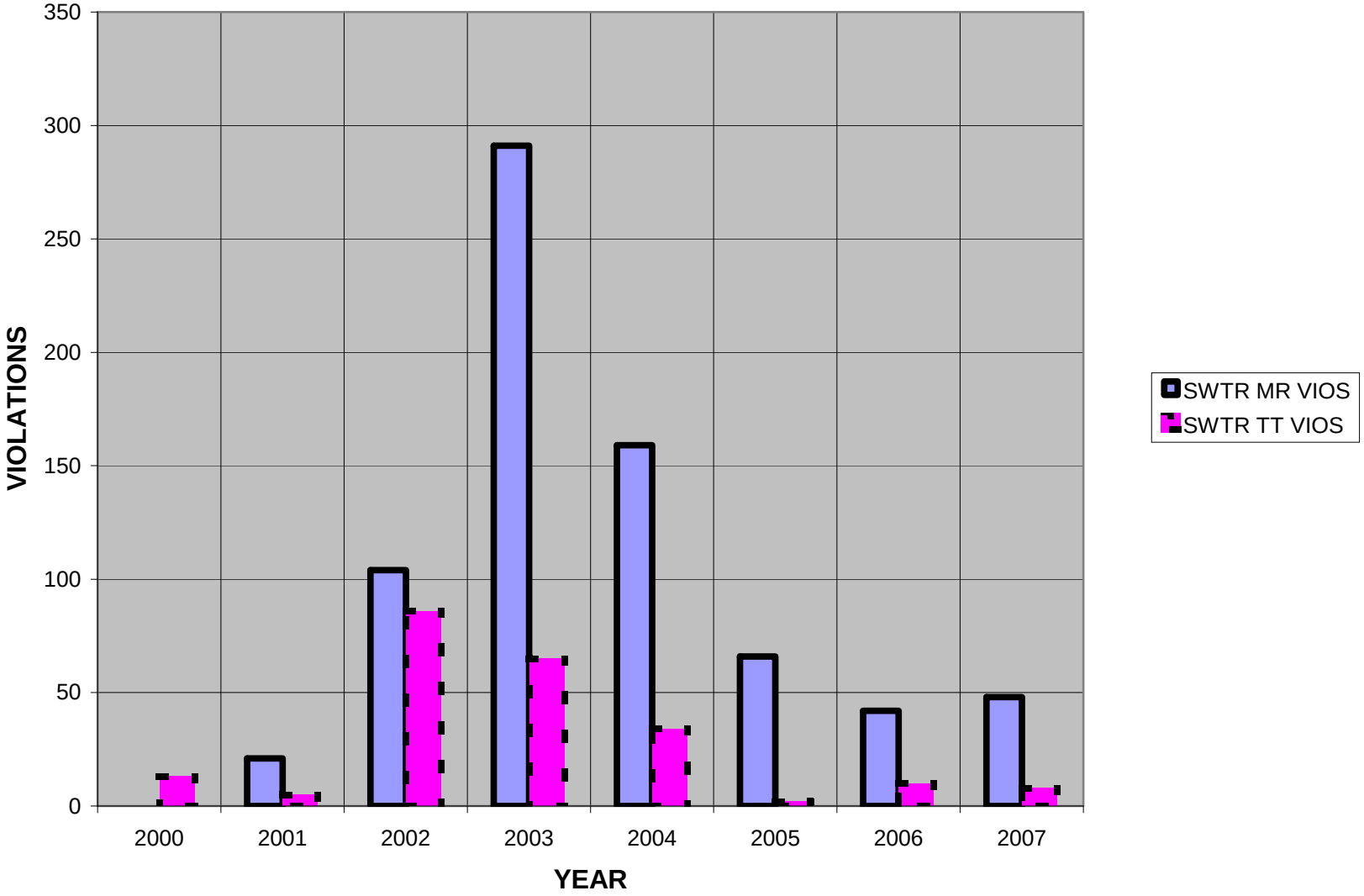
Freedom Addendum_4133


GRAPH 5. RAD VIOLATIONS
60
50
40
30
20
10
0
Violations
2000
2001
2002
2003
2004
2005
2006
2007
Year
RAD MR VIOS
RAD MCL VIOS

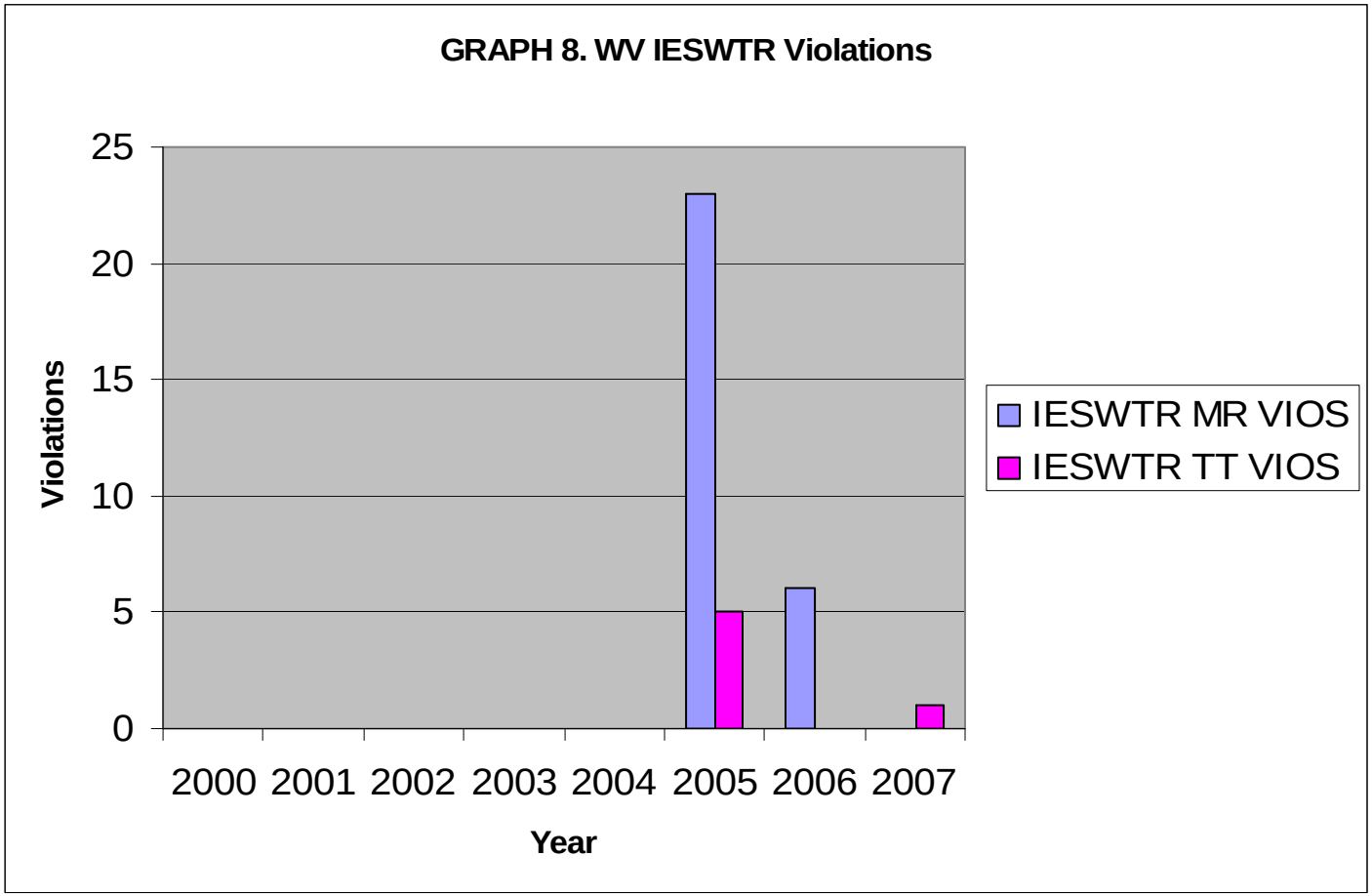
GRAPH 6. WV TCR VIOLATIONS



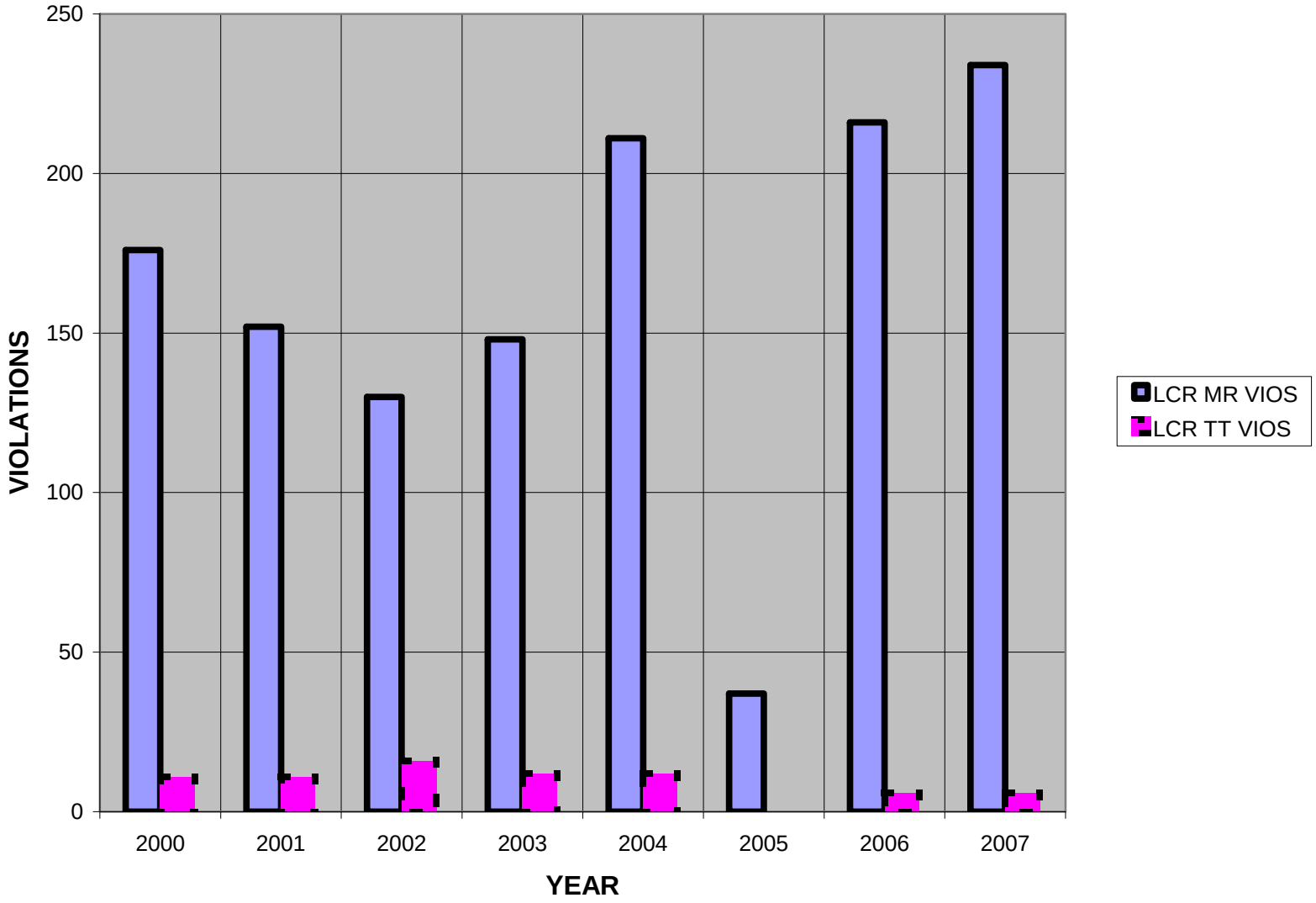
GRAPH 7. WV SWTR VIOLATIONS



Freedom Addendum_4136

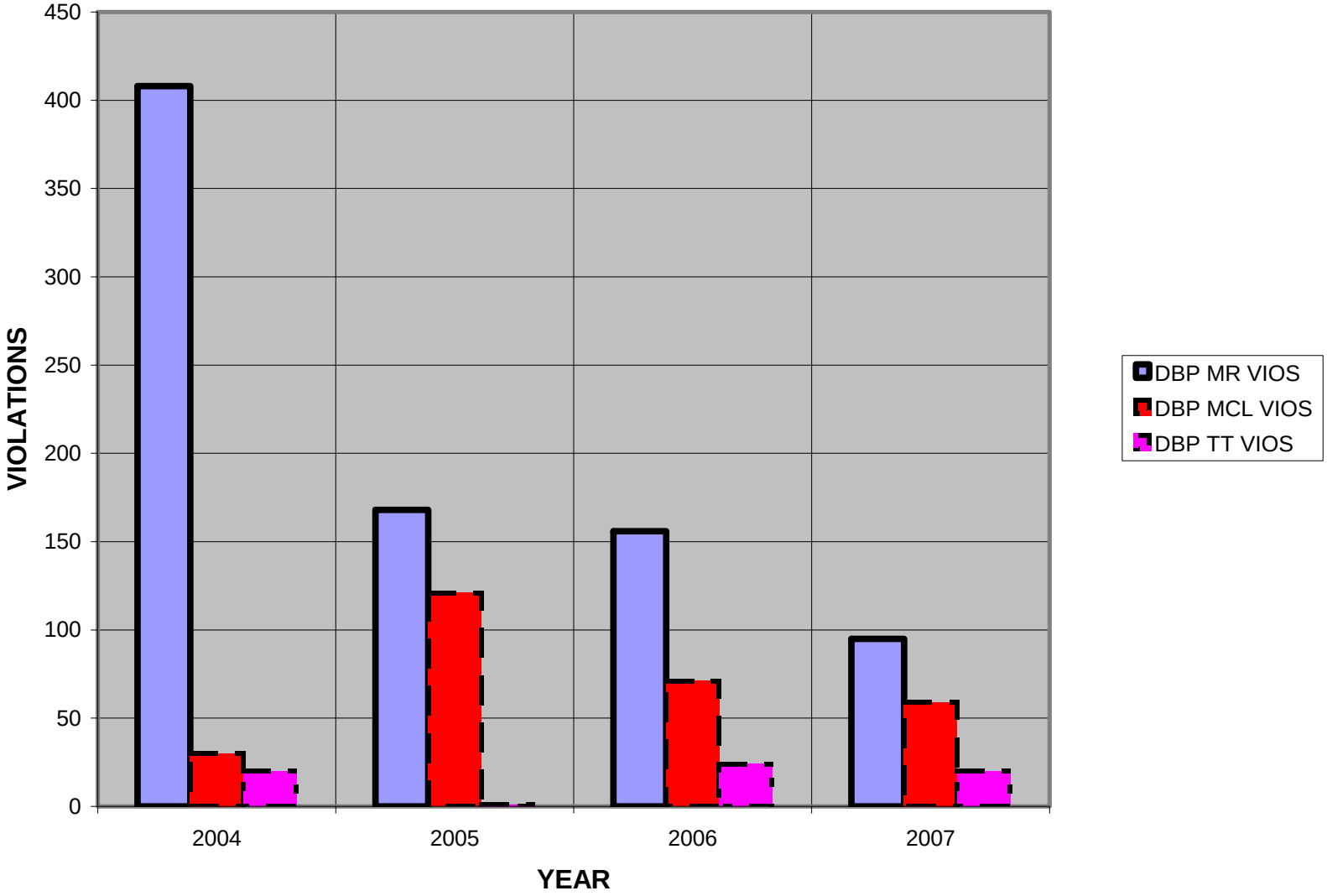

GRAPH 8. WV IESWTR Violations
25
20
15
10
5
0
Violations
2000 2001 2002 2003 2004 2005 2006 2007
Year
IESWTR MR VIOS
IESWTR TT VIOS

GRAPH 9. WV LCR VIOLATIONS

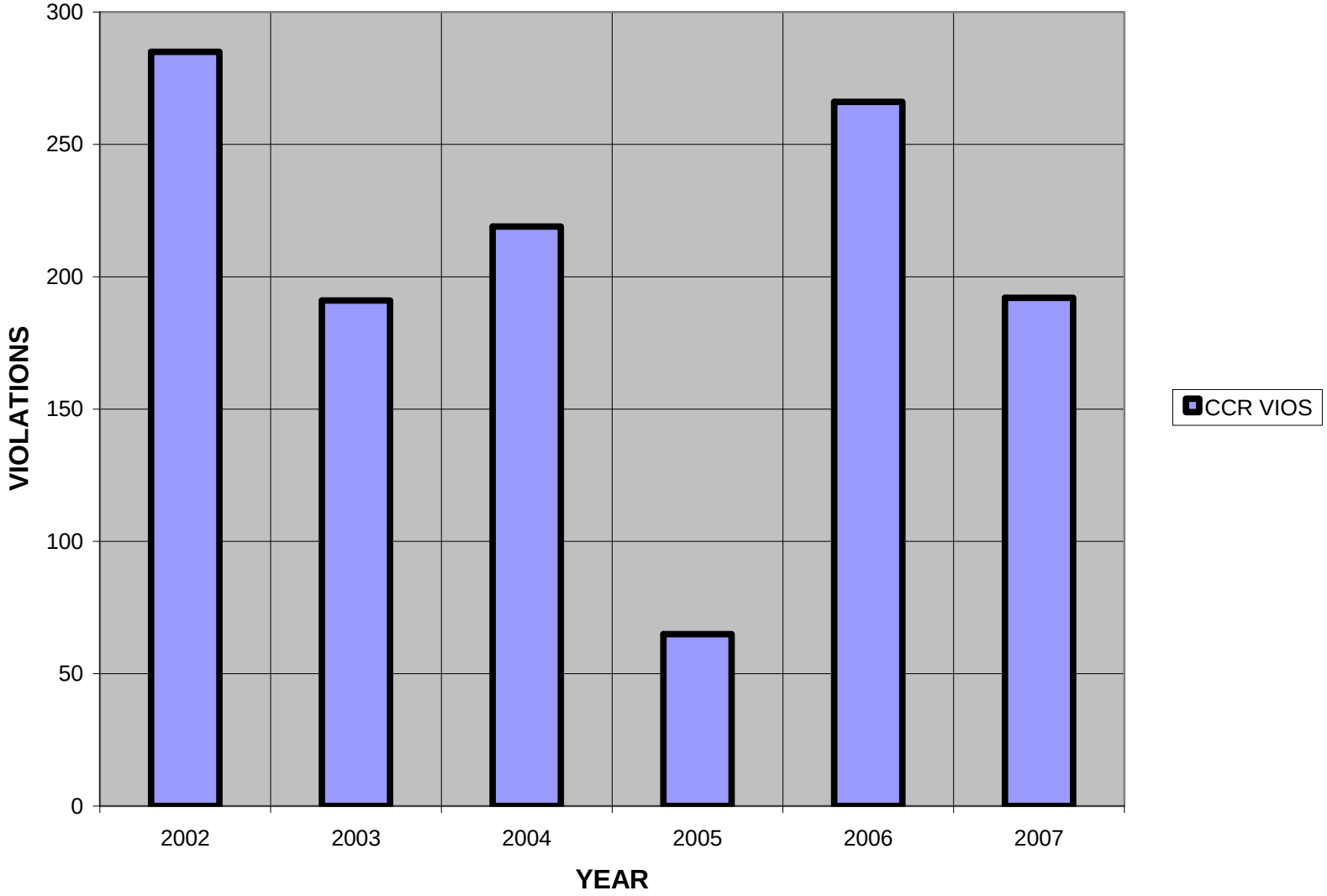


Freedom Addendum_4138

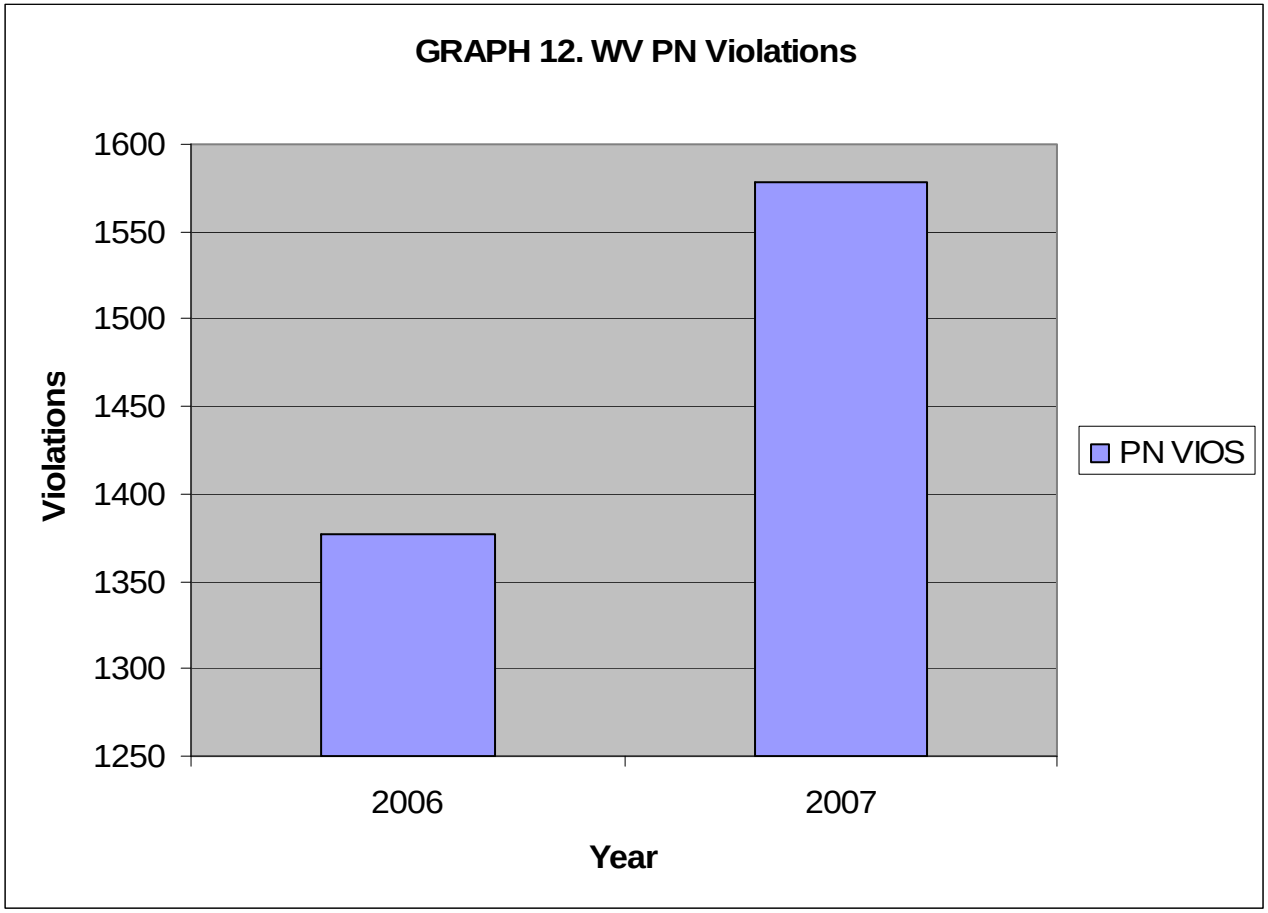
GRAPH 10. WV DBP VIOLATIONS



GRAPH 11. WV CCR VIOLATIONS



Freedom Addendum_4140


GRAPH 12. WV PN Violations
1600
1550
1500
1450
1400
1350
1300
1250
Violations
2006
2007
Year
PN VIOS

Appendix A
Violation Summary

State:	**West Virginia**
Reporting Interval:	**January 1, 2007 - December 31, 2007**

Violations	MCL		Treatment Technique		Monitoring		Consumer Notification	
Category	Violations	Systems in Violation	Violations	Systems in Violation	Violations	Systems in Violation	Violations	Systems in Violation
IOC, RAD, SOC, VOC	2	2			3174	207		
TCR	19*	16			425	222		
DBP	59	24	20****	15	95	40		
SWTR			8***	8	48	13		
IESWTR			1***	1	0	0		
CCR							192	132
PNR							1578	336
LCR			6	6	234**	124		

*** Sum of TCR acute (1) and Non-acute (18) MCL.**

****Sum of LCR initial tap monitoring/reporting (12), follow-up or routine tap monitoring/reporting (222).**

*****Sum of SWTR/IESWTR treatment techniques for filtered systems (1) and failure to filter (8).**

******Sum of DBP treatment techniques for total organic carbon (0), qualified operator failure (20).**

Appendix A
Violation Summary

State:	**West Virginia**
Reporting Interval:	**January 1, 2007 - December 31, 2007**

2007 TOTALS

State Report Data	
Total Number of Systems in Violation	**588+**
Total Number of Violations	**5861**

Variances and Exemptions
West Virginia does not permit variances, only exemptions. **One exemption was granted to the City of Thomas during the 2007 calendar year**.

Discussion

Shaded areas of the chart are no applicable; there are no applicable violations for these categories.

West Virginia's State Report is available at website www.wvdhhr.org/oehs/eed/c&e/reports.asp or by contacting the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

The State of West Virginia has developed an enforcement program that can issue administrative orders and levy fines, if needed, to assure compliance. Most enforcement actions are initated because a major monitoring violation occurs when no water samples were collected or no analytical results were reported during a particular compliance period. Often enforcement is performed in conjunction with local courts and the US EPA.

+ Total number of systems with violations for 2007
Some systems can have one or more violations

Appendix B
Violation Table

State: **West Virginia**
Reporting Interval: **January 1, 2007 – December 31, 2007**

VOLATILE ORGANIC CONTAMINANTS (VOC)

Contaminant		MCL's				Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2977	1,1-Dichloroethylene	0.007	0	0	0	51	7	34
2981	1,1,1-Trichloroethane	0.2	0	0	0	51	7	34
2985	1,1,2-Trichloroethane	0.005	0	0	0	51	7	34
2980	1,2-Dichloroethane	0.005	0	0	0	51	7	34
2983	1,2-Dichloropropane	0.005	0	0	0	51	7	34
2378	1,2,4-Trichlorobenzene	0.07	0	0	0	51	7	34
2990	Benzene	0.005	0	0	0	51	7	34
2982	Carbon tetrachloride	0.005	0	0	0	51	7	34
2380	Cis-1,2-Dichloroethylene	0.07	0	0	0	51	7	34
2964	Dichloromethane; methylene chloride	0.005	0	0	0	51	7	34
2992	Ethylbenzene	0.7	0	0	0	51	7	34
2989	Monochlorobenzene; Chlorobenzene	0.1	0	0	0	51	7	34
2968	o-Dichlorobenzene	0.6	0	0	0	51	7	34
2969	p-Dichlorobenzene	0.075	0	0	0	51	7	34
2996	Styrene	0.1	0	0	0	51	7	34
2987	Tetrachloroethylene	0.005	0	0	0	51	7	34
2991	Toluene	1.0	0	0	0	51	7	34
2979	Trans-1,2-Dichloroethylene	0.1	0	0	0	51	7	34
2984	Trichloroethylene	0.005	0	0	0	51	7	34
2976	Vinyl chloride	0.002	0	0	0	51	7	34
2955	Xylenes, Total	10	0	0	0	51	7	34
VOC Totals:			**0**	**0**	**0**	**1071**	**147**	**34**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

SYNTHETIC ORGANIC CONTAMINANTS (SOC)

Contaminant		MCL's				Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2931	1,2-Dibromo-3-chloropropane; DBCP	0.0002	0	0	0	66	8	48
2105	2,4-D	0.07	0	0	0	67	8	49
2110	2,4,5-TP;Silvex	0.05	0	0	0	66	8	48
2054	Alachlor; Lasso	0.002	0	0	0	69	8	51
2050	Atrazine	0.003	0	0	0	68	8	50
2306	Benzo(a)pyrene	0.0002	0	0	0	68	8	50
2046	Carbofuran	0.04	0	0	0	68	8	50
2959	Chlordane	0.002	0	0	0	67	8	49
2031	Dalapon	0.2	0	0	0	66	8	48
2035	Di(2-ethylhexyl) adipate	0.4	0	0	0	68	8	50
2039	Di(2-ethylhexyl)phthalate	0.006	0	0	0	69	8	51
2041	Dinoseb	0.007	0	0	0	66	8	48
2005	Endrin	0.002	0	0	0	66	8	48
2946	Ethylene dibromide (EDB)	0.00005	0	0	0	67	8	49
2010	Gamma-BHC; Lindane	0.0002	0	0	0	68	8	50
2065	Heptachlor	0.0004	0	0	0	68	8	50
2067	Heptachlor epoxide	0.0002	0	0	0	67	8	49
2274	Hexachlorobenzene; HCB	0.001	0	0	0	66	8	48
2042	Hexachlorocyclopentadiene	0.05	0	0	0	68	8	50

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

SYNTHETIC ORGANIC CONTAMINANTS (SOC)

Contaminant			MCL's			Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
2015	Methoxychlor	0.04	0	0	0	66	8	48
2036	Oxamyl; Vydate	0.2	0	0	0	68	8	50
2326	Pentachlorophenol	0.001	0	0	0	66	8	48
2040	Picloram	0.5	0	0	0	67	8	49
2037	Simazine	0.004	0	0	0	68	8	50
2383	Total Polychlorinated Biphenyls (PCB)	0.0005	0	0	0	66	8	48
2020	Toxaphene	0.003	0	0	0	66	8	48
SOC Totals:			**0**	**0**	**0**	**1745**	**208**	**53**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: **West Virginia**
Reporting Interval: **January 1, 2007 – December 31, 2007**

INORGANIC CONTAMINANTS (IOC)

Contaminant			MCL's			Monitoring		
Code	Name	MCL (mg/l)	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
1074	Antimony, Total	0.006	0	0	0	17	0	17
1005	Arsenic	0.05	2	2	1	10	1	9
1010	Barium	2.0	0	0	0	18	0	18
1075	Beryllium, Total	0.004	0	0	0	18	0	18
1015	Cadmium	0.005	0	0	0	17	0	17
1020	Chromium	0.1	0	0	0	17	0	17
1024	Cyanide	0.2	0	0	0	18	0	18
1025	Fluoride	4.0	0	0	0	19	0	19
1035	Mercury	0.002	0	0	0	17	0	17
1040	Nitrate	10 (as Nitrogen)	0	0	0	91	2	86
1041	Nitrite	1.0	0	0	0	14	0	14
1045	Selenium	0.05	0	0	0	17	0	17
1036	Nickel	0.1	0	0	0	18	0	18
1085	Thallium, Total	0.002	0	0	0	17	0	17
IOC Totals:			**2**	**2**	**1**	**308**	**3**	**102**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State:	**West Virginia**
Reporting Interval:	**January 1, 2007 – December 31, 2007**

RADIONUCLIDES CONTAMINANTS (RAD)

Contaminant			MCL's			Monitoring		
Code	**Name**	**MCL (mg/l)**	**# of Violations**	**# of RTC Violations**	**# of PWSs in Violation**	**# of Violations**	**# of RTC Violations**	**# of PWSs In Violation**
4000	Gross Alpha, Excl. Radon & U	15.0	0	0	0	50	1	18
RAD Totals:			**0**	**0**	**0**	**50**	**1**	**18**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: **West Virginia**
Reporting Interval: **January 1, 2007 – December 31, 2007**

TOTAL COLIFORMS (TCR)

Contaminant			MCL's			Monitoring		
Code	Name		# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
21	MCL, Acute		1	0	1	0	0	0
22	MCL, Monthly		18	2	15	0	0	0
23	Monitoring, Routine Major		0	0	0	397	73	217
25	Monitoring, Repeat Major		0	0	0	28	5	17
TCR Totals			**19**	**2**	**16**	**425**	**78**	**222**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

SURFACE WATER TREATMENT RULE (SWTR)

Contaminant		Monitoring			Treatment Technique		
Code	Name	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
31	Monitoring, Unfiltered, Routine/Repeat	0	0	0	0	0	0
36	Monitoring, Filtered, Routine/Repeat	48	2	13	0	0	0
41	Treatment Technique, Filtered	0	0	0	0	0	0
42	Treatment Technique, Unfiltered, Failure to Filter	0	0	0	8	0	8
SWTR Totals:		**48**	**2**	**13**	**8**	**0**	**8**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State:	**West Virginia**
Reporting Interval:	**January 1, 2007 – December 31, 2007**

INTERIM ENHANCED SURFACE WATER TREATMENT RULE (IESWTR)

Contaminant		Monitoring			Treatment Technique		
Code	**Name**	**# of Violations**	**# of RTC Violations**	**# of PWSs in Violation**	**# of Violations**	**# of RTC Violations**	**# of PWSs In Violation**
37	Failure to Profile/Consult	0	0	0	1	1	1
38	Monitoring, Routine/Major	0	0	0	0	0	0
43	Treatment Technique, Single Combined Filter Effluent	0	0	0	0	0	0
44	Treatment Technique, Monthly Combined Filter Effluent	0	0	0	0	0	0
IESWTR Totals:		**0**	**0**	**0**	**1**	**1**	**1**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

LEAD AND COPPER RULE (LCR)

Contaminant		Monitoring			Treatment Technique		
Code	Name	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
51	Initial Tap Sampling for Pb and Cu	12	2	6	0	0	0
52	Follow-up and Routine Tap Sampling	222	16	122	0	0	0
65	Public Education	0	0	0	6	0	6
LCR Totals:		**234**	**18**	**124**	**6**	**0**	**6**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

DISINFECTION BYPRODUCT RULE (DBPR)

Contaminant		MCLs			Monitoring			Treatment Technique		
Code	Name	# of Violations	# of RTC Violations	# of PWS in Violation	# of Violations	# of RTC Violations	# of PWS in Violation	# of Violations	# of RTC Violations	# of PWS in Violation
2	MCL, Average	59	19	24	0	0	0	0	0	0
27	Monitoring And Reporting Stage 1	0	0	0	95	36	40	0	0	0
12	Treatment Technique- No Certif. Operator	0	0	0	0	0	0	20	0	15
DBP Totals:		**59**	**19**	**24**	**95**	**36**	**40**	**20**	**0**	**15**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State:	**West Virginia**
Reporting Interval:	**January 1, 2007 – December 31, 2007**

CONSUMER CONFIDENCE RULE (CCR)

Contaminant		Monitoring			Treatment Technique		
Code	**Name**	**# of Violations**	**# of RTC Violations**	**# of PWSs in Violation**	**# of Violations**	**# of RTC Violations**	**# of PWSs In Violation**
71	CCR Complete Failure to Report	192	49	132	0	0	0
CCR Totals:		**192**	**49**	**132**	**0**	**0**	**0**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

PUBLIC NOTICE RULE (PN)

Contaminant		Monitoring			Treatment Technique		
Code	Name	# of Violations	# of RTC Violations	# of PWSs in Violation	# of Violations	# of RTC Violations	# of PWSs In Violation
75	PN Violation for NPDWR Violation	1578	180	336	0	0	0
PN Totals:		**1578**	**180**	**336**	**0**	**0**	**0**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix B
Violation Table

State: West Virginia
Reporting Interval: January 1, 2007 – December 31, 2007

STATE SUMMARY

Rule Name		MCLs			Monitoring			Treatment Technique			Consumer Notification		
Rule Type	Chemical Sub-Group	# of Viols	# of RTC Viols	# of PWS in Viols	# of Viols	# of RTC Viols	# of PWS in Viols	# of Viols	# of RTC Viols	# of PWS in Viols	# of Viols	# of RTC Viols	# of PWS in Viols
Chem	VOC	0	0	0	1071	147	34	-	-	-	-	-	-
Chem	SOC	0	0	0	1745	208	53	-	-	-	-	-	-
Chem	IOC	2	2	1	308	3	102	-	-	-	-	-	-
Chem	RAD	0	0	0	50	1	18	-	-	-	-	-	-
Chem	**Total**	**2**	**2**	**1**	**3174**	**359**	**137**	**-**	**-**	**-**	**-**	**-**	**-**
Rule	TCR	19	2	16	425	78	222	-	-	-	-	-	-
Rule	SWTR	-	-	-	48	2	13	8	0	8	-	-	-
Rule	IESWTR	-	-	-	-	-	-	1	1	1	-	-	-
Rule	LCR	-	-	-	234	18	124	6	0	6	-	-	-
Rule	DBP	59	19	24	95	36	40	20	0	15	-	-	-
Rule	CCR	-	-	-	-	-	-	-	-	-	192	49	132
Rule	PN	-	-	-	-	-	-	-	-	-	1578	180	402
Rule	**Total**	**78**	**21**	**40**	**802**	**134**	**399**	**35**	**1**	**30**	**1770**	**229**	**534**
Grand Totals:		**80**	**23**	**41**	**3976**	**493**	**384**	**35**	**1**	**27**	**1770**	**229**	**402**

Note: Although a PWS may be out of compliance with more than one contaminant or violation type, when calculating totals, it is counted no more than once within the population being totaled. So, the sum of NUMER OF PWS's IN VIOLATION, over the various violation types or contaminants, may not add up to the total.

Appendix C

VIOLATION CODES & TYPES

Code Value	Associated Description
01	MCL, Single Sample
02	MCL, Average
03	Monitoring, Routine
04	Monitoring, Confirmation/Check
05	Notification, State
06	Notification, Public
07	Treatment Technique (NON-SWTR)
08	Variance/Exemption/Other Compliance
09	Record Keeping
10	Operations Report
Total Coliform Rule	
21	MCL, Acute
22	MCL, Monthly
23	Monitoring, Routine Major
24	Monitoring, Minor
25	Monitoring, Repeat Major
26	Monitoring, Repeat Minor
28	Sanitary Survey
Disinfection Byproducts Rule (DBPs)	
11	Maximum Residual Disinfectant Level
12	Qualified Operator Failure
13	Maximum Residual Disinfectant Level (Acute)
27	Monitoring, Routine
27	Failure to Have Monitoring Plan
27	Monitoring, with no. missing samples
46	Inadequate DBP Precursor Removal

Appendix C (continued)
VIOLATION CODES & TYPES

Surface Water Treatment Rule

31	Monitoring, Routine/Reporting (Unfiltered)
36	Monitoring, Routine/Reporting (Filtered)
41	Treatment Technique
42	Failure to Filter

Interim Enhanced Surface Water Treatment Rule &
Long Term 1 Enhanced Surface Water Treatment Rule

29	Failure to Produce Filter Assessment/CPE
37	Failure to Profile/Consult
38	Monitoring/Reporting Violation
43	Single Combined Filter Effluent
44	Monthly Combined Filter Effluent
47	Uncovered Storage Facility

Filter Backwash Rule

39	Failure to Submit Plant Schematic
40	Failure to Properly Recycle

Lead & Copper Rule

51	Initial Tap Sampling for Pb and Cu
52	Follow-up and Routine Tap Sampling
53	Water Quality Parameter WQP
56	Initial, Follow-up or Routine Source Water
57	OCCT Study Recommendation/Study
58	OCCT Installation/Demonstration
59	WQP Entry Point Non-Compliance
63	MPL Non-Compliance
64	Lead Service Line Replacement
65	Public Education

Appendix C (continued)
VIOLATION CODES & TYPES

Consumer Confidence Rule

71	CCR Report
72	CCR Adequacy/Availability/Content

Public Notice

75	Public Notice Linked to Violation
76	Public Notice not Linked to Violation

Appendix C (continued)
CONTAMINANT MCL AND CODES

Contaminant	MCL (mg/l)	Contaminant Codes
ORGANICS		
1,2,4,-Trichlorobenzene	0.07	2378
1,1,2-Trichloroethane	0.005	2985
1,1,1-Trichloroethane	0.2	2981
2,4-D (2,4-Dichlorophoxyaene)	0.07	2105
2,4,5-TP (Silvex)	0.05	2110***
Alachlor	0.002	2051
Aldicarb sulfoxide	0.004	2043*
Aldicarb sulfone	0.002	2044*& ***
Aldicarb	0.003	2047*
Atrazine	0.003	2050
Benzene	0.005	2990
Carbofuran	0.04	2046
Carbon tetrachloride	0.005	2982
Chlordane	0.002	2959
cis-1,2-Dichloroethylene	0.07	2380
Dalapon	0.2	2031***
DBCP(1,2-Dibromo-3-chloropropane)	0.0002	2931***
Di(2-ethylhexy)adipate	0.4	2035
Di(2-ethylhexy)phthalate	0.006	2039
Dichlorobenzene (1,4-Dichlorobenzene)	0.075	2969
Dichloroethane (1,2-)	0.005	2980
Dichloroethylene 1,1-	0.007	2977
Dichloromethane (methylene chloride)	0.005	2964
Dichloropropane (1,2-)	0.005	2463
Dinoseb	0.007	2041***
Diquat	0.02	2032**

*The MCL for these contaminants have been stayed on Federal Level.

**State wide Monitoring waiver began July 1995.

***State wide Monitoring waiver began July 2005.

Appendix C (continued)

CONTAMINANT MCL AND CODES

Contaminant	**MCL (mg/l)**	**Contaminant Codes**
EDB (ethylene dibromide)	0.0005	2946***
Endothall	0.1	2033**
Endrin	0.002	2005***
Ethylbenzene	0.7	2992
Glyphosate	0.7	2034**
Heptachlor	0.0004	2065
Heptachlor epoxide	0.0002	2067
Hexachlorobenzene (HCB)	0.001	2274***
Hexachlorocyclopentadiene	0.05	2042
Lindane (BHC-gamma)	0.0002	2010
Methoxychlor	0.04	2015***
Monochlorobenzene (Chlorobenzene)	0.1	2989
o-Dichlorobenzene	0.6	2968
Oxamyl (vydate)	0.2	2036
PAHs [Benzo(a)pyrene]	0.0002	2306
PCBs (Polychlorinated biphenyls)	0.0005	2383
Pentachlorophenol	0.001	2326***
Picloram	0.5	2040
Simazine	0.004	2037
Styrene	0.1	2996
TCDD-2,3,7,8,(Dioxin)	$3x10^{-8}$	2063**
Tetrachloroethylene	0.005	2987
Toluene	1	2991
Toxaphene	0.003	2020***
trans-1,2 Dichloroethylene	0.1	2979
Trichloroethylene	0.005	2984
Vinyl chloride	0.002	2976
Xylenes (total)	10.	2955

*The MCL for these contaminants have been stayed on Federal Level.

**State wide Monitoring waiver began July 1995.

***State wide Monitoring waiver began July 2005.

Appendix C (continued)

CONTAMINANT MCL AND CODES

Contaminant	**MCL (mg/l)**	**Contaminant Codes**	
INORGANICS			
Antimony	0.006	1074	
Arsenic	.05	1005	
Asbestos	7 MFL	1094**	**7 MILLION FIBERS LITER LONGER THAN = 10 MICRONS**
Barium	2.	1010	
Beryllium	0.004	1075	
Cadmium	0.005	1015	
Chromium	0.1	1020	
Cyanide	0.2	1024	
Fluoride	4.0	1025	
Mercury	0.002	1035	
Nickel (Ni)	0.1	1036*	
Nitrate	10.	1040	
Nitrite	1.	1041	
Selenium	0.05	1045	
Thallium	0.002	1085	
Lead and Copper Action Level			
Lead (Pb)	0.015	1030	
Copper (Cu)	1.3	1022	
RADIONUCLIDES			
Gross alpha	15 pCi/l	4000	**pCi/l = pico Curies per liter**
Gross beta	4 mrem/l	4101	**mrem/l = millirems per liter**
Radium 226 & 228 (combined)	5 pCi/1	4010	
Uranium	30 ug/l	4006	

*The MCL for these contaminants have been stayed on Federal Level.

**State wide Monitoring waiver began July 1995.

***State wide Monitoring waiver began July 2005.

Appendix C (continued)

CONTAMINANT MCL AND CODES

DISINFECTION BYPRODUCTS RULE

Total Trihalomethanes (TTHMs**)**	.080 MG/L	2950
Total Haloacetic Acids (HAA5s)	.060 MG/L	2456

TREATMENT TECHNIQUES

Acrylamide	not to exceed 0.05% dosed at 1 mg/l	2265
Epichlorohydrin	not to exceed 0.01% dosed at 20 mg/l	2257
Giardia Lamblia	99.9% removed (3 log)	0200
Viruses	99.99% removed (4 log)	0200
Cryptosporidium	99% removed (2 log)	0300

TOTAL COLIFORM

Total Coliform (TC) Present/Absent 3100

1. TC monthly MCL compliance
    a. Where >40 samples are collected per month, not more than 5% can be positive/month
    b. Where [40 samples are collected per month, no more than one sample can be positive/month

2. TC sample MCL

    Any fecal coliform positive or any total coliform positive repeat sampling as a result of fecal coliform or E-coli positive routine sample.

Appendix C (continued)
CONTAMINANT CODES

CARS = Arsenic
CIOA = Inorganics Non Transient/Non Community
CIOC = Inorganics Community
CHA5 = Total Haloacetic Acids (HAA5s)
CL90 = Lead & Copper
CNO2 = Nitrite
CNO3 = Nitrate
CRAD = Radionuclides
CSOC = Regulated Synthetic Organics
CTHM = Total Trihalomethanes (TTHMs**)**
CTOA = TOC/Alkinity (raw)
CTOC = Total Organics (finished)
CVOC = Regulated Volatile Organics

(CIOA) Inorganics Non Transient/Non Community-11

1074 Antimony
1010 Barium
1075 Beryllium
1015 Cadmium
1020 Chromium
1024 Cyanide
1025 Fluoride
1035 Mercury
1036 Nickel (Ni)
1045 Selenium
1085 Thallium

(CIOC) Inorganics Community-12

1074 Antimony
1010 Barium
1075 Beryllium
1015 Cadmium
1020 Chromium
1024 Cyanide
1025 Fluoride
1035 Mercury
1036 Nickel (Ni)
1045 Selenium
1052 Sodium (Community Systems only)
1085 Thallium

Appendix C (continued)
CONTAMINANT CODES

(CSOC) Regulated Synthetic Organics-26

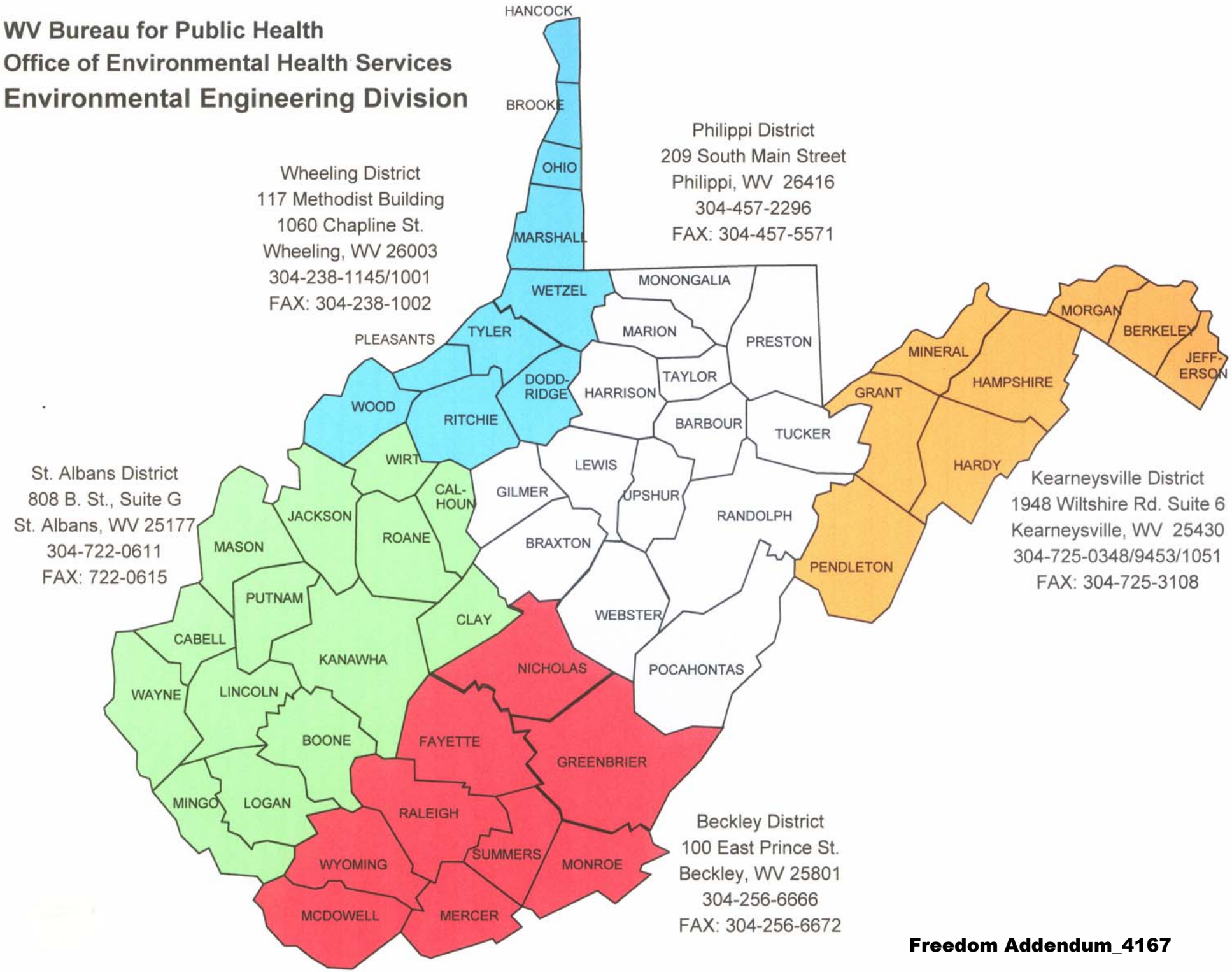
2931 1,2-Dibromo-3-chloropropane, DBCP
2105 2,4-D
2110 2,4,5-TP; (Silvex)
2051 Alachlor; (Lasso)
2050 Atrazine
2306 Benzo(a)pyrene
2010 BHC-Gamma; (Lindane)
2046 Carbofuran
2959 Chlordane
2031 Dalapon
2035 Di(2-ethylhexyl) adipate
2039 Di(2-ethylhexyl) phthalate
2041 Dinoseb
2005 Endrin
2946 Ethylene dibromide (EDB)
2065 Heptachlor
2067 Heptachlor epoxide
2274 Hexachlorobenzene; HCB
2042 Hexachlorocyclopentadiene
2015 Methoxychlor
2036 Oxamyl; (Vydate)
2326 Pentachlorophenol
2040 Picloram
2037 Simazine
2383 Total Polychlorinated Biphenyls (PCB)
2020 Toxaphene

(CVOC) Regulated Volatile Organics-21

2977 1,1-Dichloroethylene
2981 1,1,1-Trichloroethane
2985 1,1,2-Trichloroethane
2980 1,2-Dichloroethane
2983 1,2-Dichloropropane
2378 1,2,4-Trichlorobenzene
2990 Benzene
2982 Carbon tetrachloride
2380 cis-1,2-Dichloroethylene
2964 Dichloromethane; (methylene chloride)
2992 Ethylbenzene
2989 Monochlorobenzene; (Chlorobenzene)
2968 o-Dichlorobenzene
2969 p-Dichlorobenzene
2996 Styrene
2987 Tetrachloroethylene
2991 Toluene
2979 trans-1,2-Dichloroethylene
2984 Trichloroethylene
2976 Vinyl chloride
2955 Xylenes, (Total)

Appendix C (continued)
STATE VIOLATION CODES

WA	Chlorine Residual Inadequate
WB	Failure to Monitor Chlorine Residuals
WC	Failure to Maintain 30 Min Contact Time
WD	Failure to Employ Certified Operator-NC
WE	Failure to Designate Chief Operator
WF	Chief Operator Not Full Time Employee
WG	Failure to Notify of Operator Changes
WH	Failure to Possess Fluoride Certification
WI	Failure to Submit MOR by Required Date
WJ	Failure to Complete/Submit MOR
WK	Failure to Notify a Process Change
WL	Cross Connection Control Program
WM	Permitting Violation
WN	Recordkeeping
WP	Forty-Five Day Response
WQ	Failure to Submit Proper MOR Format



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